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RAW SEQUENCE LISTING

DATE: 06/26/2002

PATENT APPLICATION: US/10/027,770

TIME: 10:00:35

Input Set : A:\70103951.app

Output Set: N:\CRF3\06262002\J027770.raw

ENTERED

3 <110> APPLICANT: MAYER, BRUCE
 4 SAKSELA, KALLE
 5 KIRCHAUSEN, TOMAS
 7 <120> TITLE OF INVENTION: FUSION PROTEIN AND USES THEREOF
 9 <130> FILE REFERENCE: 701039-050001-C
 11 <140> CURRENT APPLICATION NUMBER: 10/027,770
 C--> 12 <141> CURRENT FILING DATE: 2002-06-13
 14 <150> PRIOR APPLICATION NUMBER: PCT/US00/17929
 15 <151> PRIOR FILING DATE: 2000-06-29
 17 <150> PRIOR APPLICATION NUMBER: 60/141,896
 18 <151> PRIOR FILING DATE: 1999-06-30
 20 <160> NUMBER OF SEQ ID NOS: 5
 22 <170> SOFTWARE: PatentIn Ver. 2.1
 24 <210> SEQ ID NO: 1
 25 <211> LENGTH: 809
 26 <212> TYPE: DNA
 27 <213> ORGANISM: Unknown Organism
 29 <220> FEATURE:
 30 <223> OTHER INFORMATION: Description of Unknown Organism: DNA encoding 3DX,
 31 a second-generation ScFv derived from monoclonal
 32 antibody 9E10
 34 <220> FEATURE:
 35 <221> NAME/KEY: CDS
 36 <222> LOCATION: (1)..(807)
 38 <400> SEQUENCE: 1
 39 gga tct acc atg gcc gag gtg aag ctg gtg gaa tct ggg gga gac tta 48
 40 Gly Ser Thr Met Ala Glu Val Lys Leu Val Glu Ser Gly Gly Asp Leu
 41 1 5 10 15
 43 gtg aag cct gga ggg tcc ctg aaa ctc tcc tgt gca gcc tct gga ttc 96
 44 Val Lys Pro Gly Ser Leu Lys Leu Ser Cys Ala Ala Ser Gly Phe
 45 20 25 30
 47 act ttc agt cac tat ggc atg tct tgg gtt cgc cag act cca gac aag 144
 48 Thr Phe Ser His Tyr Gly Met Ser Trp Val Arg Gln Thr Pro Asp Lys
 49 35 40 45
 51 agg ctc gag tgg gtc gca acc att ggt agt cgt ggt act tac acc cac 192
 52 Arg Leu Glu Trp Val Ala Thr Ile Gly Ser Arg Gly Thr Tyr Thr His
 53 50 55 60
 55 tat cca gac agt gtg aag gga cga ttc acc atc tcc aga gac aat gac 240
 56 Tyr Pro Asp Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Asp
 57 65 70 75 80
 59 aag aac gcc ctg tac ctg caa atg aac agt ctg cgg act gaa gac aca 288
 60 Lys Asn Ala Leu Tyr Leu Gln Met Asn Ser Leu Arg Thr Glu Asp Thr
 61 85 90 95

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63 gcc atg tat tac tgt gta aga aaa agt gaa ttt tat tac tac ggt aat 336
64 Ala Met Tyr Tyr Cys Val Arg Lys Ser Glu Phe Tyr Tyr Tyr Gly Asn
65          100          105          110
67 acc tac tat tac tct gct atg gac tac tgg ggt caa gga gcc tca gtc 384
68 Thr Tyr Tyr Tyr Ser Ala Met Asp Tyr Trp Gly Gln Gly Ala Ser Val
69          115          120          125
71 acc gtc tcc tca ggt gga ggc ggt tca ggc gga ggt gac tct ggc ggt 432
72 Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly Asp Ser Gly Gly
73          130          135          140
75 ggc ggt tcg gac att gtg ctg acc caa tct cca gct tct ttg gct gta 480
76 Gly Gly Ser Asp Ile Val Leu Thr Gln Ser Pro Ala Ser Leu Ala Val
77 145          150          155          160
79 tct cta gga cag agg gcc acc atc tcc tgc aga gcc agc gaa agt gtt 528
80 Ser Leu Gly Gln Arg Ala Thr Ile Ser Cys Arg Ala Ser Glu Ser Val
81          165          170          175
83 gat aat tat ggc ttt agt ttt atg aac tgg ttc caa cag aaa cca gga 576
84 Asp Asn Tyr Gly Phe Ser Phe Met Asn Trp Phe Gln Gln Lys Pro Gly
85          180          185          190
87 cag cca ccc aaa ctc ctc atc tat gct aca tcc aac cga gga tcc ggg 624
88 Gln Pro Pro Lys Leu Leu Ile Tyr Ala Thr Ser Asn Arg Gly Ser Gly
89          195          200          205
91 gtc cct gcc agg ttt agt ggc agt ggg tct ggg aca gac ttc agc ctc 672
92 Val Pro Ala Arg Phe Ser Gly Ser Gly Thr Asp Phe Ser Leu
93          210          215          220
95 aac atc cat cct gta gag gag gat gac tct gca atg tat ttc tgt cag 720
96 Asn Ile His Pro Val Glu Glu Asp Asp Ser Ala Met Tyr Phe Cys Gln
97 225          230          235          240
99 caa act aag gag gtt ccg tgg acg ttc ggt gga ggc acc aag ctg gaa 768
100 Gln Thr Lys Glu Val Pro Trp Thr Phe Gly Gly Gly Thr Lys Leu Glu
101          245          250          255
103 atc aaa cgg gct gat gct gca cca act gta tcc gcg gcc gc 809
104 Ile Lys Arg Ala Asp Ala Ala Pro Thr Val Ser Ala Ala
105          260          265
108 <210> SEQ ID NO: 2
109 <211> LENGTH: 269
110 <212> TYPE: PRT
111 <213> ORGANISM: Unknown Organism
113 <220> FEATURE:
114 <223> OTHER INFORMATION: Description of Unknown Organism: 3DX, a
115 second-generation ScFv derived from monoclonal
116 antibody 9E10
118 <400> SEQUENCE: 2
119 Gly Ser Thr Met Ala Glu Val Lys Leu Val Glu Ser Gly Gly Asp Leu
120 1 5 10 15
122 Val Lys Pro Gly Gly Ser Leu Lys Leu Ser Cys Ala Ala Ser Gly Phe
123 20 25 30
125 Thr Phe Ser His Tyr Gly Met Ser Trp Val Arg Gln Thr Pro Asp Lys
126 35 40 45
128 Arg Leu Glu Trp Val Ala Thr Ile Gly Ser Arg Gly Thr Tyr Thr His

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129      50      55      60
131 Tyr Pro Asp Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Asp
132 65      70      75      80
134 Lys Asn Ala Leu Tyr Gln Met Asn Ser Leu Arg Thr Glu Asp Thr
135      85      90      95
137 Ala Met Tyr Tyr Cys Val Arg Lys Ser Glu Phe Tyr Tyr Tyr Gly Asn
138      100      105      110
140 Thr Tyr Tyr Tyr Ser Ala Met Asp Tyr Trp Gly Gln Gly Ala Ser Val
141      115      120      125
143 Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly Asp Ser Gly Gly
144      130      135      140
146 Gly Gly Ser Asp Ile Val Leu Thr Gln Ser Pro Ala Ser Leu Ala Val
147 145      150      155      160
149 Ser Leu Gly Gln Arg Ala Thr Ile Ser Cys Arg Ala Ser Glu Ser Val
150      165      170      175
152 Asp Asn Tyr Gly Phe Ser Phe Met Asn Trp Phe Gln Gln Lys Pro Gly
153      180      185      190
155 Gln Pro Pro Lys Leu Leu Ile Tyr Ala Thr Ser Asn Arg Gly Ser Gly
156      195      200      205
158 Val Pro Ala Arg Phe Ser Gly Ser Gly Thr Asp Phe Ser Leu
159      210      215      220
161 Asn Ile His Pro Val Glu Asp Asp Ser Ala Met Tyr Phe Cys Gln
162 225      230      235      240
164 Gln Thr Lys Glu Val Pro Trp Thr Phe Gly Gly Gly Thr Lys Leu Glu
165      245      250      255
167 Ile Lys Arg Ala Asp Ala Ala Pro Thr Val Ser Ala Ala
168      260      265
171 <210> SEQ ID NO: 3
172 <211> LENGTH: 9
173 <212> TYPE: PRT
174 <213> ORGANISM: Unknown Organism
176 <220> FEATURE:
177 <223> OTHER INFORMATION: Description of Unknown Organism: Epitope to the
178      12CA5 antibody
180 <400> SEQUENCE: 3
181 Tyr Pro Tyr Asp Val Pro Asp Tyr Ala
182 1      5
185 <210> SEQ ID NO: 4
186 <211> LENGTH: 7
187 <212> TYPE: PRT
188 <213> ORGANISM: Unknown Organism
190 <220> FEATURE:
191 <223> OTHER INFORMATION: Description of Unknown Organism: Short
192      motif
194 <400> SEQUENCE: 4
195 Pro Glu Arg Pro Pro Lys Pro
196 1      5
199 <210> SEQ ID NO: 5
200 <211> LENGTH: 269

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201 <212> TYPE: PRT
202 <213> ORGANISM: Unknown Organism
204 <220> FEATURE:
205 <223> OTHER INFORMATION: Description of Unknown Organism: 3DX, a
206     second-generation ScFv derived from monoclonal
207     antibody 9E10 with site directed mutagenesis
209 <400> SEQUENCE: 5
210 Gly Ser Thr Met Ala Glu Val Lys Leu Val Glu Ser Gly Gly Asp Leu
211   1             5             10             15
213 Val Lys Pro Gly Gly Ser Leu Lys Leu Ser Cys Ala Ala Ser Gly Phe
214             20             25             30
216 Thr Phe Ser His Tyr Gly Met Ser Trp Val Arg Gln Thr Pro Asp Lys
217             35             40             45
219 Arg Leu Glu Trp Val Ala Thr Ile Gly Ser Arg Gly Thr Tyr Thr His
220             50             55             60
222 Tyr Pro Asp Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Asp
223   65             70             75             80
225 Lys Asn Ala Leu Tyr Leu Gln Met Asn Ser Leu Lys Ser Glu Asp Thr
226             85             90             95
228 Ala Met Tyr Tyr Cys Ala Arg Arg Ser Glu Phe Tyr Tyr Tyr Gly Asn
229             100            105            110
231 Thr Tyr Tyr Tyr Ser Ala Met Asp Tyr Trp Gly Gln Gly Ala Ser Val
232             115            120            125
234 Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly
235             130            135            140
237 Gly Gly Ser Asp Ile Val Leu Thr Gln Ser Pro Ala Ser Leu Ala Val
238   145            150            155            160
240 Ser Leu Gly Gln Arg Ala Thr Ile Ser Cys Arg Ala Ser Glu Ser Val
241             165            170            175
243 Asp Asn Tyr Gly Phe Ser Phe Met Asn Trp Phe Gln Gln Lys Pro Gly
244             180            185            190
246 Gln Pro Pro Lys Leu Leu Ile Tyr Ala Ile Ser Asn Arg Gly Ser Gly
247             195            200            205
249 Val Pro Ala Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Ser Leu
250             210            215            220
252 Asn Ile His Pro Val Glu Asp Asp Pro Ala Met Tyr Phe Cys Gln
253   225            230            235            240
255 Gln Thr Lys Glu Val Pro Trp Thr Phe Gly Gly Gly Thr Lys Leu Glu
256             245            250            255
258 Ile Lys Arg Ala Asp Ala Ala Pro Thr Val Ser Ala Ala
259             260            265

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VERIFICATION SUMMARY

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L:12 M:271 C: Current Filing Date differs, Replaced Current Filing Date